

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/051040 A1

(51) International Patent Classification⁷: E05D 7/04, 5/06

(72) Inventor; and

(21) International Application Number:

(75) Inventor/Applicant (for US only): WOOLCOCK, Timothy, Richard, Martin [GB/GB]; 30 Marlborough Road, Chipping Norton, Oxfordshire OX7 5PD (GB).

PCT/GB2003/005218

(22) International Filing Date:

27 November 2003 (27.11.2003)

(74) Agents: FARROW, Robert, Michael et al.; Land Rover, Patent Department 53G16/4, Banbury Road, Lighthorne, Warwick CV35 0RG (GB).

(25) Filing Language:

English

(81) Designated State (national): US.

(26) Publication Language:

English

(84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(30) Priority Data:

0228028.7 30 November 2002 (30.11.2002) GB

Declaration under Rule 4.17:

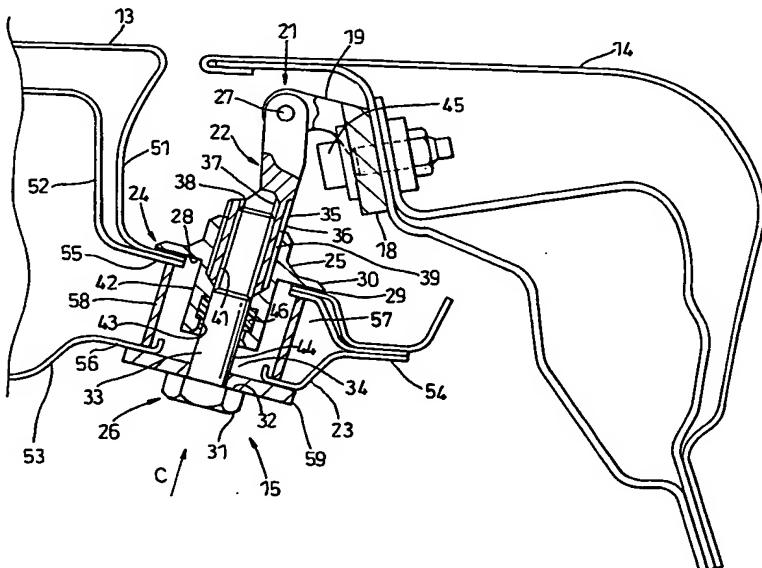
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

[Continued on next page]

(54) Title: AN ADJUSTABLE HINGE ASSEMBLY



(57) Abstract: A hinge assembly (15) for a vehicle tailgate (14) comprises a first hinge member (21) fastened to the tailgate (14) and a second hinge member (22) fastened to a hollow flange (23) of a vehicle roof (13) by means of adjustment device (24) comprising an adjustment nut (25) and a locking screw. The second hinge member (22) has a hollow cylindrical shank portion (35) having a left-hand external screw thread (36) and a right-hand internal thread (38), the adjustment nut (25) having a left-hand thread (39) engaged with the external thread (36) of the hollow shank portion (35) and the locking screw (26) having a right-hand thread (41) engaged with the internal thread (38) of the hollow shank portion (35). The adjustment nut (25) has a tubular spigot (42) with a friction ring (46) for gripping the shank of the locking screw (26). To set the hinge assembly (15), the first and second hinge members

(21) and (22) are provided as a sub-assembly complete with the pivot pin (27) and with the adjustment nut (25) threaded as far as it will go onto the shank portion (35) of the second hinge member (22). The first hinge member (21) is then fastened to the tailgate (14) and the tailgate moved into the required position using an assembly fixture (not shown). The locking screw (26) with the washer (59) in place is then inserted into the bore (43) of the adjustment nut (25) so that the thread (41) winds into the friction ring 46 with a self-tapping action until the friction grip between the locking screw (26) and the adjustment nut (25) provides sufficient torque for the locking screw (26) to rotate the adjustment nut (25) in the clockwise direction to move it into contact with the flange (23). The locking screw (26) continues to rotate without further rotation of the adjustment nut (25) to clamp the hinge assembly (15) to the flange (23).

WO 2004/051040 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.